

Table 7

HHI Calculations

Digital : Analog / 6 : 1

Cellular Operators Bandwidth Devoted to Analog : 10 MHz

Firms	Initial Bandwidth	Effective Capacity*	Market Share	HHI Contribution	Acquired Bandwidth	Final Bandwidth	Effective Capacity*	Market Share	HHI Contribution
Cellular 1	35	160	17.4%	302	5	40	190	20.7%	427
Cellular 2	35	160	17.4%	302		35	160	17.4%	302
3	40	240	26.1%	681		40	240	26.1%	681
4	40	240	26.1%	681		40	240	26.1%	681
5	20	120	13.0%	170	-5	15	90	9.8%	96
<b>Totals</b>	<b>170</b>	<b>920</b>		<b>2,136</b>		<b>170</b>	<b>920</b>		<b>2,186</b>
<b>Herfindahl-Hirschman Analysis</b>					Initial HHI Change Final HHI	2,136 50 2,186			

\* Effective Capacity is defined as bandwidth devoted to digital multiplied by the ratio of digital's advantage over analog plus bandwidth devoted to analog.

Source: FCC, Second Report and Order : Charles River Associates.

**Table 8**

**HHI Calculations**

Digital : Analog / 6 : 1

Cellular Operators Bandwidth Devoted to Analog : 10 MHz

Firms	Initial Bandwidth	Effective Capacity*	Market Share	HHI Contribution	Acquired Bandwidth	Final Bandwidth	Effective Capacity*	Market Share	HHI Contribution
Cellular 1	35	160	17.4%	302	5	40	190	20.7%	427
Cellular 2	35	160	17.4%	302		35	160	17.4%	302
3	40	240	26.1%	681	-5	35	210	22.8%	521
4	40	240	26.1%	681		40	240	26.1%	681
5	20	120	13.0%	170		20	120	13.0%	170
<b>Totals</b>	<b>170</b>	<b>920</b>		<b>2,136</b>		<b>170</b>	<b>920</b>		<b>2,101</b>
<b>Herfindahl-Hirschman Analysis</b>				Initial HHI Change Final HHI	2,136 -35 2,101				

\* Effective Capacity is defined as bandwidth devoted to digital multiplied by the ratio of digital's advantage over analog plus bandwidth devoted to analog.

Source: FCC, Second Report and Order ; Charles River Associates.

Table 9

HHI Calculations  
Digital : Analog / 6 : 1

Firms	With Analog Handicap (10MHz)				Without Analog Handicap			
	Bandwidth	Effective Capacity*	Market Share	HHI Contribution	Bandwidth	Effective Capacity*	Market Share	HHI Contribution
Cellular 1	25	100	10.9%	118	25	150	14.7%	216
Cellular 2	25	100	10.9%	118	25	150	14.7%	216
3	30	180	19.6%	383	30	180	17.6%	311
4	30	180	19.6%	383	30	180	17.6%	311
5	20	120	13.0%	170	20	120	11.8%	138
6	10	60	6.5%	43	10	60	5.9%	35
7	10	60	6.5%	43	10	60	5.9%	35
8	10	60	6.5%	43	10	60	5.9%	35
9	10	60	6.5%	43	10	60	5.9%	35
<b>Totals</b>	<b>170</b>	<b>920</b>		<b>1,342</b>	<b>170</b>	<b>1,020</b>		<b>1,332</b>
<b>Herfindahl-Hirschman Analysis</b>				<b>1,342</b>				<b>1,332</b>

\* Effective Capacity is defined as bandwidth devoted to digital multiplied by the ratio of digital's advantage over analog plus bandwidth devoted to analog.

Source: FCC, Second Report and Order ; Charles River Associates.

**Table 10**  
**HHI Calculations**  
 Digital : Analog / 1 : 1  
 Entry of Two SMRs with 5 MHz Each

Firms	Pre-SMR Entry			Post-SMR Entry		
	Bandwidth	Market Share	HHI Contribution	Bandwidth	Market Share	HHI Contribution
Cellular 1	25	14.7%	216	25	13.9%	193
Cellular 2	25	14.7%	216	25	13.9%	193
3	30	17.6%	311	30	16.7%	278
4	30	17.6%	311	30	16.7%	278
5	20	11.8%	138	20	11.1%	123
6	10	5.9%	35	10	5.6%	31
7	10	5.9%	35	10	5.6%	31
8	10	5.9%	35	10	5.6%	31
9	10	5.9%	35	10	5.6%	31
SMR 10				5	2.8%	8
SMR 11				5	2.8%	8
<b>Totals</b>	<b>170</b>		<b>1,332</b>	<b>180</b>		<b>1,204</b>
<b>Herfindahl-Hirschman Analysis</b>			<b>1,332</b>			<b>1,204</b>

Source: FCC, Second Report and Order ; Charles River Associates.

Table 11A

HHI Calculations

Digital : Analog / 1 : 1  
Entry of One SMR with 10 MHz

Firms	Pre-SMR Entry			Post-SMR Entry		
	Market Bandwidth	Share	HHI Contribution	Market Bandwidth	Share	HHI Contribution
Cellular 1	35	20.6%	424	35	19.4%	378
Cellular 2	35	20.6%	424	35	19.4%	378
3	40	23.5%	554	40	22.2%	494
4	40	23.5%	554	40	22.2%	494
5	20	11.8%	138	20	11.1%	123
SMR 6				10	5.6%	31
<b>Totals</b>	<b>170</b>		<b>2,093</b>	<b>180</b>		<b>1,898</b>
<b>Herfindahl-Hirschman Analysis</b>			<b>2,093</b>			<b>1,898</b>

Source: FCC, Second Report and Order; Charles River Associates.

**Table 11B**

**HHI Calculations**

Digital : Analog / 1 : 1

One SMR with 10 MHz

Firms	Initial Bandwidth	Market Share	HHI Contribution	Acquired Bandwidth	Final Bandwidth	Market Share	HHI Contribution
Cellular 1	35	19.4%	378	5	40	22.2%	494
Cellular 2	35	19.4%	378		35	19.4%	378
3	40	22.2%	494		40	22.2%	494
4	40	22.2%	494		40	22.2%	494
5	20	11.1%	123		20	11.1%	123
SMR 6	10	5.6%	31	-5	5	2.8%	8
<b>Totals</b>	<b>180</b>		<b>1,898</b>		<b>180</b>		<b>1,991</b>
<b>Herfindahl-Hirschman Analysis</b>							
			Initial HHI		1,898		
			Change		93		
			Final HHI		1,991		

Source: FCC, Second Report and Order; Charles River Associates.

Table 12

CTIA PROPOSAL

HHI Calculations

Digital : Analog / 6 : 1

Firms	With Analog Handicap (10MHz)				Without Analog Handicap			
	Bandwidth	Effective Capacity*	Market Share	HHI Contribution	Bandwidth	Effective Capacity*	Market Share	HHI Contribution
Cellular 1	25	100	10.9%	118	25	150	14.7%	216
Cellular 2	25	100	10.9%	118	25	150	14.7%	216
3	20	120	13.0%	170	20	120	11.8%	138
4	20	120	13.0%	170	20	120	11.8%	138
5	20	120	13.0%	170	20	120	11.8%	138
6	20	120	13.0%	170	20	120	11.8%	138
7	10	60	6.5%	43	10	60	5.9%	35
8	10	60	6.5%	43	10	60	5.9%	35
9	10	60	6.5%	43	10	60	5.9%	35
10	10	60	6.5%	43	10	60	5.9%	35
<b>Totals</b>	<b>170</b>	<b>920</b>		<b>1,087</b>	<b>170</b>	<b>1,020</b>		<b>1,125</b>
<b>Herfindahl-Hirschman Analysis</b>					<b>1,087</b>			<b>1,125</b>

\* Effective Capacity is defined as bandwidth devoted to digital multiplied by the ratio of digital's advantage over analog plus bandwidth devoted to analog.

Source: Charles River Associates.